REMARKS

Claims 1-49, 55, 57, 58, 60, 64-68, 73, 77-88, 90 and 92 are pending. By this Amendment, claim 59 is canceled without prejudice or disclaimer and the specification and claims 15, 25, 35, 59 and 68 are amended. Reconsideration in view of the above-amendments and following remarks is respectfully requested.

Applicants submitted an Information Disclosure Statement (IDS) on July 20, 2004. Applicants respectfully request consideration of the IDS and a return of the PTO-1449 in accordance with MPEP § 609.

Claims 15, 25, 35 and 68 were objected to. Claims 15, 25, 35 and 68 have been amended accordingly. Reconsideration and withdrawal of the objection are respectfully requested.

The Office Action contains the following rejections under 35 U.S.C. § 103(a): claims 40-43, 45-49, 77-82 and 88 were rejected over Yasui et al. (U.S. Patent 4,848,503) in view of "The seated man (Homo Sedens) The seated work position. Theory and pactice" an article by A.C. Mandal (hereinafter "Mandal"); claim 92 was rejected over Bombardier (U.S. Patent 3,698,497); claim 85 was rejected over Bombardier in view of Marier et al. (U.S. Patent 5,660,245); claim 83 was rejected over Yasui et al. in view of Trautwein (U.S. Patent 3,583,507); claims 6-39, 44 and 90 were rejected over Yasui et al. in view of Applicants' admitted prior art (hereinafter "AAPA"); claims 1-5, 84, 87 and 88 were rejected over Yasui et al. in view of "The Complete Snowmobile Repair Handbook" by Paul Dempsey (hereinafter "Dempsey"); claims 55 and 57 were rejected over Marier et al.; claim 58 was rejected over Marier et al. in view of Parks (U.S. Patent 5,251,948); claims 59 and 60 were rejected over Christensen et al. (U.S. Patent 3,734,219) in view of Hauser (U.S. Patent 3,578,095); claims 64-68 were rejected over Dempsey in view of AAPA; and claims 73 and 86 were rejected over Kitamura et al. (Japanese Patent Application Kokai Publication No. H02-274681) in view of Trautwein.

By way of introduction to some of the arguments presented herein, the examiner's attention is directed to MPEP § 2141, which states: "Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquires enunciated therein as a background for determining obviousness are as follows: (A) Determining the scope and contents of the prior art; (B) Ascertaining the differences between the prior art and the claims in issue; (C)

Resolving the level of ordinary skill in the pertinent art; and (D) Evaluating evidence of secondary considerations." MPEP § 2141 further states: "Objective evidence or secondary considerations such as unexpected results, commercial success, long-felt need, failure of others, copying by others, licensing, and skepticism of experts are relevant to the issue of obviousness and must be considered in every case in which they are present. When evidence of any of these secondary considerations is submitted, the examiner must evaluate the evidence." (Underlining emphasis added.) See also MPEP § 716.01 which states: "Evidence traversing rejections, when timely presented, must be considered by the examiner whenever present. All entered affidavits, declarations, and other evidence traversing rejections are acknowledged and commented upon by the examiner in the next succeeding action." (Underlining emphasis added.) MPEP § 2141 also states: "Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case." (Underlining emphasis in original.)

It is respectfully submitted that the examiner has failed to apply the standard of patentablity to this application. In particular, Applicants filed a Declaration of Robert Handfield under 37 C.F.R. § 1.132 on July 9, 2002. The Declaration contained substantial evidence of the non-obviousness of the claimed invention. The Declaration also clearly addressed the non-obviousness of claim 55 with respect to Marier et al. in paragraph 35. The Declaration discussed, in paragraph 41, the failure of Trautwein to disclose or suggest features recited in claim 73. The Declaration also discussed, in paragraph 46, the failure of Yasui et al. to disclose or suggest a tunnel as recited in claim 88.

In response to the Declaration, the examiner stated on page 7, lines 1-3, of the November 14, 2002 Office Action that "Applicant's evidence of commercial success and unexpected results will not be discussed because none of the previous rejections under 35 USC 103 is repeated herein."

In the January 5, 2005 Office Action, the examiner essentially repeats the previous rejections under 35 U.S.C. § 103(a) by re-applying Marier et al. against claim 55, Trautwein against claim 73, and Yasui et al. against claim 88 in essentially the same manner as addressed in the Declaration. The examiner, however, provided Applicants with no reasoning why the evidence previously submitted in the Declaration was not persuasive in overcoming the rejections, including the rejections based on Marier et al., Trautwein and Yasui et al.

It is respectfully requested that, as required by MPEP §§ 716.01 and 2141, in the event the rejections are maintained, the examiner provide specific explanations why the evidence submitted in the Handfield Declaration is insufficient to overcome the rejections.

Claim 59 was rejected under 35 U.S.C. § 102(b) over Bombardier. Claim 59 has been canceled without prejudice or disclaimer, thus rendering moot the rejection.

Claims 40-43, 45-49, 77-82 and 88 were rejected under 35 U.S.C. § 103(a) over Yasui et al. in view of Mandal. The rejection is respectfully traversed.

MPEP § 2141.01(a) states: "The examiner must determine what is 'analogous prior art' for the purpose of analyzing the obviousness of the subject matter at issue. 'In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.'" MPEP § 2141.01(a) further states: "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."

It is respectfully submitted that Mandal is non-analogous prior art. Mandal is neither in Applicants' field of endeavor, snowmobiles, nor reasonably pertinent to the particular problem with which the inventor was concerned.

As discussed, for example, on page 1, lines 13-27, one of the problems faced by Applicants is that conventional snowmobiles place the rider in a generally upright position at a location toward the rear of the snowmobile, which amplifies the magnitude of the forces transferred from bumps on the ground to the rider. Furthermore, as discussed, for example, on page 10, line 34 through page 11, line 5, another problem faced by Applicants is that when a rider on a conventional snowmobile sees a large bump ahead, the rider naturally tries to raise himself off of the seat to minimize the impact of the bump as he passes over it. However, when positioned on the conventional snowmobile, with his feet forward of his center of gravity and at an incline on the footrests, the rider must pull himself up by pulling on the steering device using his upper body. However, even after lifting himself, as the rider's center of gravity remains rearward of the center of gravity of the snowmobile, the rider will still perceive the large bump.

It is respectfully submitted that Mandal would not have commended itself to Applicants in consideration of their problems. Mandal is concerned with the design of furniture, office and school, including tables, chairs and desks, to alleviate the problem of

back pain caused by working in the seated positions for long periods of time. Mandal includes an exhaustive discussion of the sitting posture, including the flattening of the lumbar curve. Mandal also discusses studies of school children's work positions and how desks, tables, and chairs may be designed to prevent or alleviate the problem of back strain that may be caused from working for long hours in the sitting position.

With respect to the discussion on page 5, line 19 through page 6, line 5 of the Office Action of the "ideal" sitting position discussed by Mandal, it is respectfully submitted that Applicants are not concerned with what is the "ideal" sitting position for school children or office workers who spend hours a day in a passive, inactive sitting position. Applicants are concerned, however, with the positioning of a rider of a snowmobile, for example when the snowmobile is passing over uneven terrain. As discussed above and in the present application, riding a snowmobile requires a rider to assume a dynamic positioning, for example shifting from a seated to a somewhat standing position to avoid or minimize the impact bumps as the snowmobile passes over uneven terrain. Mandal simply provides no discussion that those skilled in the snowmobile art would find pertinent to the design of a snowmobile.

It is also respectfully submitted that Mandal's brief discussion of horseback riding on page 26 would not have commended itself to Applicants attention in considering the problems discussed in the instant application. Although horseback riding is generally more of a dynamic sitting position than school or office work, it is respectfully submitted that the particular posture assumed by a horseback rider would be of no more interest to a snowmobiler than the posture of a snowmobiler would be to a horseback rider. If for no other reason, the dynamic movement of a horse differs appreciably from the dynamic movement of a snowmobile. Moreover, on a horse, the rider's feet are located in stirrups, which freely move in relation to the saddle. On a snowmobile, this is not the case. In addition, the a horseback rider grasps reins to control the speed and direction of the horse. The reins are also freely movable, which is not the case with a steering device of a snowmobile. Furthermore, a snowmobile rider may use the steering device to assist himself in raising off the seat, i.e., stand up on the snowmobile, which is frequently done in anticipation of passing over uneven, bumpy terrain. A horseback rider cannot use the reins to lift himself from the saddle because pulling on the reins in an attempt to stand up would cause the horse to stop altogether.

Among other things, as Mandal is non-analogous prior art, it may not serve as the basis for a rejection of any of claims 40-43, 45-49, 77-82 and 88. Applicatns respectfully

submit that combination of Yasui et al. and Mandal fails to present a *prima facie* case of obviousness against any of the claims. Accordingly, Applicants respectfully request the withdrawal of the rejecection.

MPEP § 2143 states: "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

It is respectfully submitted that the combination of Yasui et al. and Mandal fails to present a *prima facie* case of obviousness against claims 40-43, 45-49, 77-82 and 88 because the combination fails to describe or suggest all the limitations of the claims. Moreover, there is no motivation or suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references as suggested by the examiner.

Claim 40 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and a footrest disposed below each side of the seat, each said footrest being dimensioned with respect to the seat and the steering device to support the rider's foot thereon, wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle β with the line passing through the footrest position and the seat position, wherein the line passing through the footrest position and the steering position forms angle γ with the line passing through the

steering position and the seat position, and wherein angle α is between 63 and 152°, angle β is between 16 and 84°, and angle γ is between 11 and 42°.

The examiner acknowledges on page 4, line 12 through page 5, line 11 of the Office Action that the drawings of Yasui et al. are not to scale, but concludes that Yasui et al. disclose the claimed angles α and β "definitely within the rather broad range provided in the claim" and also concludes that the claimed angle γ is disclosed by Yasui et al. The examiner then determines that "the only claimed limitations found in claim 40 and not deemed to be met by Yasui et al. is the use of a 'standard rider', i.e. having dimensions and weight of a 50% human male and the rider's torso tilted toward the steering device when in a 'standard seating position.'"

It is respectfully submitted that the examiner's determination that the angles α and β are "definitely within the rather broad range provided in the claim" and the determination that the angle γ is disclosed by Yasui et al. are entitled to little value. See MPEP § 2125. It is also respectfully submitted that the examiner's determination that Yasui et al. disclose all of the claim limitations with the exception of the standard rider and the rider's torso being tilted toward the steering device in the standard position is incorrect. Although Applicants also recognize that the drawings of Yasui et al. are not to scale, as acknowledged by MPEP § 2125, the drawings may be relied upon for what they would reasonably teach one of ordinary skill in the art. Figure 1 of Yasui et al. clearly shows the rider's elbows positioned behind the rider's feet, not substantially over the rider's feet, as recited in claim 40.

Mandal fails to cure the deficiencies of Yasui et al. Mandal discloses that tilting a chair forward, or providing a chair that includes a seat that can be tilted forward, reduces bending of the lumbar curve of the back, thus reducing or preventing back sprain. However, Mandal does not necessarily disclose or suggest that the person's elbows are positioned over their feet in this position. Figure 9 of Mandal shows that the person's elbow may or may not be positioned over their feet. Other factors, such as those discussed on pages 25-26 of Mandal, must also be considered in determining the "ideal" sitting position. After considering Mandal as a whole, Applicants respectfully submit that there is no disclosure or suggestion that any combination of these factors necessarily results in the person's elbows being substantially over their feet. Moreover, there is clearly no disclosure or suggestion by Mandal that a standard snowmobile rider would be positioned so that the elbows were substantially over the feet.

In addition, as discussed above, Mandal discloses a tilting chair. On page 23, Mandal discloses that Figure 10 shows a seat that slopes 15° forwards, thus saving 20° of the lumbar bending, and a table top that slopes 5°, saving another 5° of lumbar bending. Claim 40 does not recite a tilting chair or seat. Claim 40 recites a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet. Neither Yasui et al. or Mandal disclose or suggest this feature.

It is respectfully submitted that the examiner's conclusion on page 5, lines 12-18, that it would have been obvious to have constructed the snowmobile with a "standard rider" in mind is nothing more than hindsight reconstruction of the claimed invention. The examiner presents no evidence or compelling reasoning why one of ordinary skill in the art, having knowledge of the small snowmobile of Yasui et al., would have been motivated to reconfigure the small snowmobile of Yasui et al. so as to position a standard rider having the dimensions and weight of a 50% human male in the manner recited in claim 40. The examiner's reliance on Mandal's disclosure of an "ideal" sitting position is misplaced. AS illuminated above, Mandal is concerned with the design of school and office furniture to alleviate or prevent back sprain caused by sitting for hours at desks and in chairs. Mandal's disclosure provides no suggestion or motivation to one of ordinary skill to reconfigure any type of vehicle, let alone the small snowmobile of Yasui et al.

With respect to the examiner's discussion on page 6, lines 5-18, that Yasui et al.'s seat and footrests would allow a rider to position himself in a number of different seating positions based upon comfort level, physical conditioning, length of ride and skill level and that a rider will specifically choose how he sits, and thus it would have been obvious to have had an operator select a standard seating position based upon personal preference, it is respectfully submitted that the examiner has failed to ascertain the differences between the claimed subject matter and the prior art. Applicants are not claiming how an actual rider (i.e., a living, breathing human being) would be positioned on their inventive snowmobile. Applicants are claiming a snowmobile that is configured in such a way that a standard rider assuming a standard position would be in the position recited in claim 40. The standard rider is a design tool, or metric. It is similar to a crash test dummy. It is not affected by such factors as comfort level, physical conditioning, length of ride, skill level, or preference.

Those factors are not part of the "subject matter as a whole" and have no place in the determination of obviousness.

As the combination of Yasui et al. and Mandal fails to describe or suggest all the limitations of claim 40 and as there is no motivation or suggestion to combine the references, the combination fails to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request the withdrawal of this rejection.

Claims 41-43 and 88 recite additional features of the invention and are allowable for the reasons discussed above with respect to claim 40 and for the additional features recited therein. Applicants, therefore, respectfully request the withdrawal of the rejection with respect to claims 41-43 and 48.

Claim 45 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and a footrest disposed below each side of the seat, each said footrest being dimensioned and configured with respect to the seat and the steering device to support the rider's foot thereon; wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle γ with the line passing through the steering position and the seat position, and wherein $\alpha \approx 2.5\gamma$.

The Office Action on page 8, lines 4-5, acknowledges that Yasui et al. does not disclose or suggest the relationship $\alpha \approx 2.5\gamma$. The examiner then concludes that the claimed relationship would have been obvious because "the positions shown in Figure 1 would suggest to one of ordinary skill in the art to configure a snowmobile so that the seat position, foot position, and steering position are relatively located with respect to one another for rider comfort since such associated angles will vary as the rider shifts around moving his feet

along the sideboards, moves forward and back along the seat, and changes where the steering handlebar is gripped. Thus, selection of such angles and angular relationships, is dependent on the comfort and safety desired by the operator. Such angularity and angularity relationship will depend upon quite a few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device."

It is not clear what "positions shown in Figure 1" the examiner is referring to. Figure 1 of Yasui et al. shows the rider in a single position. It is also respectfully submitted that the examiner's determination that Figure 1 of Yasui et al. would suggest to one of ordinary skill in the art to reconfigure the snowmobile is incorrect. Figure 1 of Yasui et al. is exactly what Yasui et al. describe it to be: a side elevation view of a small snowmobile constructed in accordance with an embodiment of their invention.

The examiner's discussion of a rider shifting his feet, his seat position, and his steering grip are irrelevant to the determination of obviousness. Again, Applicants are not claiming how an actual rider would be positioned on their snowmobile. Applicants are claiming a snowmobile that is configured in such a way as to position a standard rider in a standard position.

With respect to the examiner's discussion of providing a "desired optimum configuration," it appears to be the position of the examiner that one of ordinary skill would be motivated to "optimize" the design of Yasui et al.'s small snowmobile and that such optimization would result in an angular relationship exactly as recited in claim 45. Such an optimization, even assuming it would have been obvious, resulting exactly in Applicants' claimed angular relationship is either an incredible coincidence, or an impermissible hindsight reconstruction of the claimed invention. Applicants respectfully submit that it is the latter.

The examiner's discussion of the "compactness" of the rider and/or device is simply not understood. Compactness of the rider, the device and/or the snowmobile is neither a concern of Applicants, Yasui et al. or Mandal. The consideration of rider, device, or snowmobile compactness is not part of the subject matter as a whole and is completely irrelevant to the determination of obviousness.

As the combination of Yasui et al. and Mandal fails to describe or suggest all the limitations of claim 45 and as there is no motivation or suggestion to combine the references,

the combination fails to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claim 46 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat and the rider's thighs are substantially parallel to ground while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; wherein the seat defines a seat position and the steering device defines a steering position for the standard rider in the standard position, and wherein a line passing through the steering position and the seat position forms an angle ϕ with horizontal that is between 15 and 51°.

The Office Action alleges on page 9, lines 1-3, that Yasui et al. shows an angle "well within the broad range provided in the claim." Applicants again respectfully submit that such determinations, absent a specific teaching separate and apart from a drawing that is not to scale, are entitled to little value. Applicants also respectfully submit that the combination of Yasui et al. and Mandal fails to describe or suggest all the claim limitations, for example the rider's elbows substantially over the rider's feet. Applicants also respectfully submit that there is no motivation or suggestion to combine Yasui et al. and Mandal. Accordingly, the combination fails to present a *prima facie* case of obviousness. Since the references cannot be combined fairly to describe or suggest the claimed combination, Applicants respectfully request withdrawal of the rejection.

Claims 47-49 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 46 and for the additional features recited therein. As a result, Applicants respectfully request withdrawal of the rejection with respect to these claims as well.

Claim 77 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat

terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a drive track operatively coupled to the engine, the drive track including a belt entrained about at least two axles, including a forward-most axle; two skis disposed on the frame; a steering device disposed on the frame forward of the seat and operatively connected to the two skis for steering the snowmobile; and right and left sideboards extending laterally from the frame below the seat on either side thereof, each of the sideboards having a forward portion suitable for placement of a rider's foot thereon, wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position forward of the forward-most axle of the drive track, and the forward portions of the sideboards define a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle β with the line passing through the footrest position and the seat position, wherein the line passing through the footrest position and the steering position forms angle γ with the line passing through the steering position and the seat position, and wherein angle α is between 63 and 152°, angle β is between 16 and 84°, and angle γ is between 11 and 42°.

The examiner groups the rejection of claim 77 with the rejection of claim 40 and states that the claimed angles are disclosed by Figure 1 of Yasui et al. Applicants respectfully submit that such a determination is entitled to little value, and that the combination of Yasui et al. and Mandal fails to describe or suggest all the limitations of claim 77. Applicants also respectfully submit that there is no motivation to combine the references. Therefore, the combination fails to present a *prima facie* case of obviousness and should be withdrawn.

Claims 78-80 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 77 and for the additional features recited therein. Therefore, it is respectfully submitted that the rejection of these claims also should be withdrawn.

With respect to the discussion of claims 78-80 on page 6, line 19 through page 7, line 21, it is respectfully submitted that the examiner's conclusion that Figure 1 suggests a reconfiguration of the small snowmobile of Yasui et al. is incorrect. It is further respectfully submitted that the examiner's discussion of "optimizing" the snowmobile of Yasui et al. to

result in the exact angles claimed by Applicants is as misplaced and incorrect as the examiner's discussion of optimization with respect to claim 45. It is even further respectfully submitted that such "optimization" of Yasui et al. is nothing more than an impermissible hindsight reconstruction of the claimed invention. With respect to the examiner's determination that, even without the "specific effort" to "optimize" the small snowmobile of Yasui et al., "it would have been obvious for a standard operator to have positioned himself at these specific angles," it is respectfully submitted that the examiner has again failed to correctly ascertain the differences between the claims and the prior art. The standard rider is not an actual human being. Applicants are not claiming how an actual human being would position himself on a snowmobile according to his skill, comfort level, or any other factor of personal preference. Such considerations are irrelevant to the determination of obviousness.

Claim 81 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; two skis disposed on the frame; a steering device operatively connected to the two skis, the steering device being spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and a sideboard extending laterally from the frame below each side of the seat, each said sideboard having a forward portion dimensional and configured with respect to the seat and the steering device to support a rider's foot thereon, wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the forward portion of each said sideboard defines a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle β with the line passing through the footrest position and the seat position, wherein the line passing through the footrest position and the steering position forms angle γ with the line passing through the steering position and the seat position, and wherein angle α, angle β, and angle γ satisfy the relationship $\alpha \geq \beta \geq \gamma$.

The combination of Yasui et al. and Mandal does not describe or suggest all the limitations of claim 81, including, for example, the standard rider's elbows being

substantially over the standard rider's feet and the claimed angular relationships, and there is no motivation or suggestion to combine Yasui et al. and Mandal. Accordingly, the combination fails to present a *prima facie* case of obviousness. As such, the rejection should be withdrawn.

Claim 82 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; two skis disposed on the frame; a steering device operatively connected to the two skis, the steering device being spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the standard rider's torso is slightly tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; and a sideboard extending laterally from each side of the frame below the seat, each said sideboard having a forward portion dimensioned and configured with respect to the seat and the steering device to support a rider's foot thereon, wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the forward portions of the sideboards define a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle γ with the line passing through the steering position and the seat position, and wherein $\alpha \approx 2.5\gamma$.

The combination of Yasui et al. and Mandal does not describe or suggest all the limitations of claim 82, including, for example, the standard rider's elbow being substantially above the standard rider's feet and the claimed angular relationship. In addition, there is no motivation or suggestion to combine the references, not even the alleged "optimization" discussed on page 8 of the Office Action. The discussion of "optimization" and the examiner's conclusion that such optimization would result in the claimed invention is nothing more than an exercise in impermissible hindsight reconstruction. Since the combination fails to present a supportable rejection for obviousness, reconsideration and withdrawal of the rejection of claims 40-43, 45-49, 77-82 and 88 under 35 U.S.C. § 103(a) over Yasui et al. in view of Mandal are respectfully requested.

Claim 92 was rejected under 35 U.S.C. § 103(a) over Bombardier. The rejection is respectfully traversed.

Claim 92 recites an assembly comprising a frame including a tunnel; a straddle seat mounted on the frame; an engine disposed on the frame in front of the seat; two skis disposed on the frame; a steering shaft operatively connected to the two skis, the steering shaft being disposed over the engine at an angle ε of between 25° and 40° from vertical; wherein the tunnel supports a drive belt coupled to the engine and defines a footrest on each side of the seat that is inclined at an angle Δ with horizontal that is between 0° to -10°; and wherein a forward-most axle of the drive belt is positioned rearward of the steering shaft.

The Office Action on page 11, lines 2-4, acknowledges that "[i]t is not specifically evident if the more specific angular range 25-40 degrees is met by Bombardier." After repeating the discussion regarding the "desired optimum configuration" of the snowmobile of Bombardier "for rider comfort and compactness," the examiner concludes that it would have been obvious to provide the steering shaft of Bombardier at an angle of from 25°-40° from vertical.

It appears that coincidences abound with respect to the present invention. Not only has the examiner determined that it would have been obvious to "optimize" the small snowmobile of Yasui et al. to result in exactly the angular relationships recited in claims 46 and 82, it appears that one of ordinary skill in the art also would have been motivated to optimize the snowmobile of Bombardier to result in the exact angular range recited in claim 85. As before, Applicants respectfully submit that the examiner's conclusion is an impermissible hindsight reconstruction of the claimed invention, rather than a remarkable coincidence resulting from the nebulous concept of "optimizing" the prior art.

It is also respectfully noted that the shaft means 52 of Bombardier is disposed intermediate the ends of the steering shaft, not rearward of the steering shaft as recited in claim 92. Therefore, Bombardier fails to describe or suggest all the limitations of claim 92 and fails to present a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection of claim 92 under 35 U.S.C. § 103(a) over Bombardier are respectfully requested.

Claim 85 was rejected under 35 U.S.C. § 103(a) over Bombardier in view of Marier et al. The rejection is respectfully traversed.

Claim 85 recites a snowmobile having a center of gravity without a rider, comprising a frame including a pair of footrests each defining a forward-most surface, the frame including a tunnel defining an upper-most surface; a straddle seat disposed on the frame; an engine disposed on the frame in front of the seat; two skis disposed on the frame; and a forward-most drive track axle disposed on the frame forward of the pair of footrests and forward of the center of gravity, wherein an angle between a line passing through the forward-most drive track axle and the center of gravity and a horizontal line passing through the forward-most drive track axle is less than 55°; wherein the center of gravity is positioned below the upper-most surface of the tunnel, and wherein the center of gravity is positioned in substantial alignment with the forward-most surface of each of said pair of footrests.

The Office Action on page 12, lines 7-11, acknowledges that Bombardier does not disclose or suggest that an angle between a line passing through the forward-most drive track axle and the center of gravity and a horizontal line passing through the forward-most drive track axle is less than 55°. The examiner attempts to cure this deficiency by citing column 2, lines 12-15, of Marier et al. for the proposition that it would have been obvious to one of ordinary skill in the art to have positioned the engine in the frame relative to the drive track axle such that an angle of less than 55° is formed with respect to the center of gravity and the drive track axle in order to provide handling and steering. There is no disclosure or suggestion, however, by Marier et al. of the claimed angular relationship.

Applicants are well aware that the standard of obviousness is not whether the features of one prior art references may be bodily incorporated into another prior art reference. It is respectfully submitted, however, that a combination of references, neither of which discloses a particular claim limitation, can not present a *prima facie* case of obviousness. The presentation of a *prima facie* case of obviousness requires more than the mere probability or possibility that a claimed feature may result from the combination. The presentation of a *prima facie* case of obviousness also requires more than the hindsight determination that a particular claimed feature, neither of which is disclosed or suggested by the prior art, would have been obvious to one of ordinary skill.

As the combination of Bombardier and Marier et al. fails to describe or suggest all the limitations of claim 85, the combination fails to present a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection of claim 85 under 35 U.S.C. § 103(a) over Bombardier in view of Marier et al. are respectfully requested.

Claim 83 was rejected under 35 U.S.C. § 103(a) over Yasui et al. in view of Trautwein. The rejection is respectfully traversed.

Claim 83 recites a snowmobile of any one of claims 77 to 82 further comprising right and left toe-holds disposed respectively above the forward portion of each sideboard for allowing the rider to releasably secure himself to the snowmobile.

It is respectfully noted that claim 83 depends from any one of claims 77 to 82, which were rejected over the combination of Yasui et al. and Mandal. As the combination of Yasui et al. and Trautwein does not include the features of Mandal, it is respectfully submitted that the combination of Yasui et al. and Trautwein fails to present a *prima facie* case of obviousness. It is also respectfully submitted that the combination of Yasui et al. and Trautwein, and the combination of Yasui et al., Mandal and Trautwein, fails to describe or suggest all the limitations of claim 83, and that there is no motivation or suggestion for the combination, or combinations.

The Office Action on page 13, lines 5-8, states that Trautwein discloses sideboards 10 on left and right sides and that the sideboard shown in Figure 7 has a toe hold portion that extends up at the forward end of the toe hold and curves back over the forwardmost portion of the footboard to provide a releasable toe hold.

Figure 7 of Trautwein shows a footrest 10. At best, the figure shows that the footrest 10 has a raised edge. There is no disclosure by the figure of the footrest providing a toe hold for the rider's feet. The rider's feet are shown flat on the footrests. There is no engagement of the rider's toes with a toe hold.

As the combination of Yasui et al. and Trautwein fails to describe or suggest all the limitations of claim 83 the combination fails to present a *prima facie* case obviousness. Reconsideration and withdrawal of the rejection of claim 83 under 35 U.S.C. § 103(a) over Yasui et al. in view of Trautwein are respectfully requested.

Claims 6-39, 44, and 90 were rejected under 35 U.S.C. § 103(a) over Yasui et al. in view of AAPA. The rejection is respectfully traversed.

Before addressing the rejection of the claims individually, it is respectfully submitted that there is no motivation or suggestion to combine Yasui et al. and AAPA against any of the pending claims. AAPA is a large snowmobile of the type that Yasui et al. dismisses as relevant in column 1, lines 11-21. As discussed, Yasui et al. provide their small snowmobile as an alternative to snowmobiles such as the one in AAPA. One of ordinary skill in the art would not have been motivated to combine the teachings of Yasui et al. and AAPA because

Yasui et al. clearly state that they developed their small snowmobile from an interest in providing a smaller, lighter snowmobile that can be conveniently operated and used by a single person, and to provide the small snowmobile with an engine variable speed drive of the type normally used in a motor scooter. The features of the snowmobile of AAPA would provide none of the advantages that the small snowmobile of Yasui et al. was developed for, and in fact would actually reduce or eliminate any such advantages.

Claim 6 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a first center of gravity without the rider and a second center of gravity with the rider in the standard position, and wherein a line passing through the first center of gravity of the snowmobile and the second center of gravity forms an angle with horizontal that is between 35 and 90°.

The Office Action on page 14, line 22 through page 15, line 2, states that AAPA discloses an angle between a line connecting the center of gravity of the rider and the center of gravity of the snowmobile relative to horizontal that appears to be well within the ranges claimed.

It is respectfully noted that claim 6 does not recite an angle between a line connecting the center of gravity of the rider and the center of gravity of the snowmobile relative to horizontal. Claim 6 recites an angle between a line passing through the first center of gravity of the snowmobile (center of gravity without the standard rider) and the second center of gravity (center of gravity with the standard rider) forms an angle with horizontal that is between 35 and 90°. AAPA does not disclose or suggest such an angle. The examiner's conclusions on page 15, lines 4-8, that "the center of gravity of the combined snowmobile and rider will also fall on the line connecting the two centers of gravity" and that "the line through the combined rider/snowmobile c.o.g. would have the same angle relative to horizontal and fall within the broad ranges claimed" are incorrect, and irrelevant to the determination of obivouness. Claim 6 does not recite that the center of gravity of the

combined snowmobile and rider will also fall on the line connecting the two centers of gravity, nor does claim 6 recite the line through the combined rider/snowmobile c.o.g. having the same angle relative to horizontal.

As the combination of Yasui et al. and AAPA does not disclose or suggest all the limitations of claim 6, the combination fails to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request the withdrawal of the rejection.

Claims 7-9 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 6 and for the additional features recited therein. With respect to the examiner's determination on page 15, lines 18-19, that the claimed features are "not specifically evident" and the examiner's conclusion on page 15, line 20 through page 16, line 3, that such features would be the result of a "desired optimum configuration" for "rider comfort and compactness of the device," Applicants again respectfully submit that the claimed invention can not result from a combination of references which admittedly lack one or more claimed features. Applicants also respectfully submit that the examiner's discussion of "desired optimum configuration" is nothing more than an exercise in impermissible hindsight reconstruction and wishful thinking. Accordingly, Applicants respectfully request the withdrawal of the rejection.

Claim 10 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; a forward-most drive track axle disposed on the frame; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile; and wherein a distance between a vertical line passing through the forward-most drive track axle and a vertical line passing through the center of gravity of the rider in the standard position is between 15 and 65 cm.

The Office Action on page 16, lines 7-11, alleges that Yasui et al. disclose that the distance between the center of gravity of the rider and the center of gravity of the snowmobile is approximately the distance between the rider's elbow to his fingertips. The examiner arrives at this conclusion by determining that the center of gravity of Yasui et al.'s

snowmobile is approximately at the drive sprocket, although Yasui et al. make no mention of the center of gravity for the snowmobile snowmobile described. The examiner then states that, as disclosed by Applicants' description of the standard rider, the distance from the elbow to the finger tips is approximately 43.5 centimeters, which is within the claimed range. Based on the unsupported conclusion that Yasui et al. disclose a center of gravity which is approximately at the drive sprocket and the dimensions of the standard rider, the examiner concludes on page 16, lines 17-19, that "it would have been obvious to make the distance between the center of gravity of the Yasui snowmobile about the distance from the rider's elbow to his fingertips." It is respectfully noted, however, that claim 10 does not recite the distance between the center of gravity of the rider and the center of gravity of the snowmobile. Claim 10 recites the distance between a vertical line through the forward-most drive track axle and a vertical line through the center of gravity of the rider in the standard position.

It is unclear why the examiner concludes on page 16, lines 17-19, that it would have been obvious to modify the Yasui et al. snowmobile to include the claimed distance when the examiner previously determined, incorrectly, on page 16, lines 7-11, that Yasui et al. already disclose the claimed distance. Regardless, it is respectfully submitted that the combination of Yasui et al. and AAPA do not disclose the limitations of claim 10, and that there is no motivation to combine the references.

As discussed above, the examiner's allegation on page 16, line 10, that the center of gravity of the Yasui et al. snowmobile is approximately at the drive sprocket is completely unsupported by the disclosure of Yasui et al. The examiner's conclusion is speculation at best. It is respectfully submitted that examiner speculation is insufficient for establishing a *prima facie* case of obviousness. It is further respectfully submitted that there is no motivation or suggestion to combine Yasui et al. and AAPA and that the examiner's determination that one of ordinary skill in the art would select the exact distance recited in the claims "based upon the desired rider comfort and safety" is an impermissible hindsight reconstruction of the claimed invention. AAPA does not remedy the deficiency of Yasui et al. The distance between the forward most drive track axle and the rider center of gravity of of AAPA is significantly more than the claimed range because the rider sits much further back from the forward most drive track axle on the conventional snowmobile, as shown in Figure 1 of the application.

As the combination of Yasui et al. and AAPA fails to describe or suggest all the limitations of claim 10, and as there is mo motivation or suggestion to combine the references, the combination fails to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claims 11-15 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 10 and for the additional features recited therein. Applicants, therefore, also respectfully request that the rejection with respect to claims 11-15 be withdrawn.

Claim 16 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; a forward-most drive track axle disposed on the frame; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider having a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile; and wherein a line passing through the forward-most drive track axle and the center of gravity of the rider in the standard position forms an angle with horizontal that is between 41 and 75°.

The Office Action groups the rejection of claim 16 with the rejection of claim 6, but provides no discussion as to where the claimed angle is found in either Yasui et al. or AAPA. It is respectfully submitted that neither Yasui et al. nor AAPA disclose or suggest a line passing through the forward-most drive track axle and the center of gravity of the rider in the standard position forming an angle with horizontal that is between 41 and 75°.

As the combination of Yasui et al. and AAPA fails to disclose or suggest all the limitations of claim 16, and as there is no motivation or suggestion to combine the references, the combination fails to present a *prima facie* case of obviousness. Therefore, Applicants respectfully request that the rejection be withdrawn.

Claims 17-19 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 16 and for the additional features recited therein. In addition, it is respectfully submitted that the examiner's discussion of "the desired optimum configuration" with respect to claims 17-19 is nothing more than impermissible

hindsight reconstruction of the claimed invention. Accordingly, Applicants respectfully request that the rejection of claims 17-19 also be withdrawn.

Claim 20 recites a snowmobile, comprising: a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support suitable for a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a center of gravity without the rider, and wherein a distance between a vertical line passing through the center of gravity of the snowmobile without the rider and a vertical line passing through the center of gravity of the rider in the standard position is between 5 and 55 cm.

The Office Action provides no indication where the claimed distance is found in either Yasui et al. or AAPA. The Office Action on page 17, lines 17-19 (in relation to the rejection of claims 1-5, 84, 87 and 88), acknowledges that "Yasui fails to teach the exact horizontal position of the center of gravity of the vehicle without the rider relative to the center of gravity of the vehicle with the rider." AAPA does not cure this deficiency of Yasui et al. In AAPA the distance between the center of gravity of the vehicle without the rider relative to the center of gravity of the vehicle with the rider is greater than 55 cm because the rider sits further back on the conventional snowmobile as shown Figure 1.

The combination of Yasui et al. and AAPA fails to describe or suggest all the limitations of claim 20 and fails to present a *prima facie* case of obviousness. There is also no motivation or suggestion to combine the references. Accordingly, it is respectfully requested that the rejection be withdrawn.

Claims 21-25 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 20 and for the additional features recited therein. Applicants, therefore, respectfully request withdrawal of the rejection of claims 21-25.

Claim 30 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame

behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a center of gravity with the rider, and wherein a distance between a vertical line passing through the center of gravity of the snowmobile with the rider and a vertical line passing through the center of gravity of the rider in the standard position is between 0 and 50 cm.

As discussed above, the Office Action acknowledges that Yasui et al. fail to disclose or suggest the exact horizontal position of the center of gravity of the vehicle without the rider relative to the center of gravity of the vehicle with the rider. It is also respectfully submitted that Yasui et al. also fail to disclose or suggest the distance between the center of gravity of the snowmobile with the rider and the center of gravity of the rider in the standard position. AAPA fails to cure this deficiency of Yasui et al. Accordingly, the combination fails to present a *prima facie* case of obviousness. There is also no suggestion or motivation to combine the references. For at least these reasons, Applicants request that the rejection be withdrawn.

Claims 31-35 recite additional features of the invention and are allowable for the same reasons as discussed above with respect to claim 30 and for the additional features recited therein. Accordingly, Applicants respectfully submit that the rejection of these claims also should be withdrawn.

Claim 36 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider having a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a center of gravity with the rider, and wherein a line passing through the center of gravity of the snowmobile with the rider in the

standard position and the center of gravity of the rider in the standard position forms an angle with horizontal that is between 35 and 84°.

The Office Action provides no explanation where the claimed angle may be found in either Yasui et al. or AAPA. However, as Yasui et al. do not disclose or suggest anything at all regarding the center of gravity of the snowmobile with the rider or the center of gravity of the rider, it is respectfully submitted that Yasui et al. do not disclose or suggest anything regarding what angle a line passing through these two points would form with horizontal. AAPA fails to cure this deficiency of Yasui et al. and the combination fails to present a *prima facie* case of obviousness. There is also no motivation or suggestion to combine the references. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claims 37-39 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 36 and for the additional features recited therein. As a result, it is respectfully submitted that the rejection of claims 37-39 should be withdrawn.

Claim 44 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed on the frame and spaced forward of the seat such that, when the rider grasps the steering device in the standard position, the rider's torso is tilted toward the steering device and the rider's arms extend toward the steering device with the rider's elbows substantially over the rider's feet; two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and a footrest disposed below each side of the seat, each said footrest being dimensioned and configured with respect to the seat and the steering device to support the rider's foot thereon; wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position, wherein a line passing through the seat position and the steering position forms angle α with a line passing through the seat position and the footrest position; wherein a line passing through the footrest position and the steering position forms angle β with the line passing through the footrest position and the seat position, wherein the line passing through the footrest position and the steering position forms angle γ with the line passing through the

steering position and the seat position, wherein angle α, angle β, and angle γ satisfy the relationship $\alpha \geq \beta \geq \gamma$; and wherein a distance between vertical lines passing through the steering position and the seat position is between 40-90 cm.

The Office Action on page 17, lines 3-13, alleges that Yasui et al. discloses a distance between the seat position and the steering position that is approximately the length of the rider's thigh. Based on the length of the standard rider's thigh provided by Applicants, the examiner concludes that it would have been obvious to dimension the snowmobile of Yasui et al. so that the distance between the seat position and the steering position is within the claimed range.

It is respectfully submitted that the examiner's determination that Applicants' disclosure of the dimensions of a standard rider provides one of ordinary skill in the art the motivation or suggestion to modify the snowmobile of Yasui et al. is nothing more than hindsight reconstruction. Yasui et al.'s stated objective is to provide a small snowmobile design which is capable of being powered by the engine variable speed drive of the type normally used in a motor scooter. The mere existence of a design tool such as a standard rider does not suggest to one of ordinary skill in the art a redesign of the snowmobile of Yasui et al., particularly a redesign that results in exactly the claimed angular relationships and distance recited in claim 44.

The failure of the combination of Yasui et al. and AAPA to suggest or describe all the limitations of claim 44 and the lack of motivation or suggestion to combine the references results in the failure of the combination to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 44.

Claim 90 recites a snowmobile comprising a frame; a straddle seat disposed on the frame; an engine disposed on the frame in front of the seat; a steering device disposed on the frame and spaced forward of the seat; two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and a footrest disposed below each side of the seat; wherein, for the standard rider in the standard position, the seat defines a seat position, the steering device defines a steering position, and the footrests define a footrest position, wherein a distance between vertical lines passing through the steering position and the seat position is between 40-90 cm.

There is no disclosure or suggestion by either Yasui et al. or AAPA of the distance recited in claim 90. There is also no suggestion or motivation to combine Yasui et al. and AAPA. Therefore, the combination fails to present a *prima facie* case of obviousness. In summary, reconsideration and withdrawal of the rejection of claims 6-39, 44 and 90 under 35 U.S.C. § 103(a) over Yasui et al. in view of AAPA are respectfully requested.

Claims 1-5, 84, 87, and 88 were rejected under 35 U.S.C. § 103(a) over Yasui et al. in view of Dempsey. The rejection is respectfully traversed.

Claim 1 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a first center of gravity without the rider and a second center of gravity with the rider in the standard position, and wherein a distance between a vertical line passing through the first center of gravity and a vertical line passing through the second center of gravity is between 0 cm and 14 cm.

The Office Action acknowledges on page 17, lines 17-22, that Yasui et al. fail to disclose the distance between the first center of gravity without the rider and the second center of gravity with the rider, but alleges that it would have been obvious to position the center of gravity of the rider on the snowmobile of Yasui et al. at approximately 43 cm from the center of gravity of the snowmobile. The examiner alleges that this determination of obviousness was previously determined in the Office Action. The examiner then engages in a discussion of the weight of the snowmobile, without motivation to do so, and selects an average weight of 900 lbs. from Dempsey. After combining the assumed weight with the incorrect determination that "the distance between the rider c.g. and the vehicle c.g. is approximately 43 cm" and performing a "simple calculation," the examiner concludes that the "combined c.g." would be 6.8 cm, approximately 7 cm, from "the c.g. of the vehicle." From this conclusion, the examiner determines that it would have been obvious "to construct a snowmobile with the features of Yasui at a weight of approximately 900 lbs." as suggested

by Dempsey "with a center of gravity of the vehicle at approximately 7 cm from the center of gravity of the rider, as determined above, in order to size the Yasui snowmobile for the standard rider."

Applicants respectfully submit that the examiner's analysis is faulty for several reasons. Among them, Applicants are not claiming a snowmobile that weighs 900 lbs. (While not relevant, Applicants respectfully note that one version of the snowmobile made according to the teachings of the invention weighs approximately 535 lbs., which is considerably less than 900 lbs.) The examiner's exercise in mathematics is a failure to correctly ascertain the differences between the claimed invention and the prior art. Applicants are also not claiming a snowmobile "with a center of gravity of the vehicle at approximately 7 cm from the center of gravity of the rider" as alleged by the examiner on page 18, lines 7-8. Applicants are claiming a snowmobile having a first center of gravity without the rider and a second center of gravity with the rider, wherein the distance between vertical lines passing through the first and second centers of gravity is between 0 and 14 cm. The combination of Yasui et al. and Dempsey, thus, does not result in the invention of claim 1.

As the combination of Yasui et al. and Dempsey fails to describe or suggest all the limitations of claim 1, and as there is no motivation or suggestion to combine the references, the combination fails to present a *prima facie* case of obviousness. Accordingly, it is respectfully submitted that the rejection of claim 1 should be withdrawn.

Claims 2-5 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein. With respect to the examiner's determination on page 18, lines 11-16, that it would have been obvious "to position the rider at any number of standard positions along the length of the vehicle, including a position forward of that shown, which would result in center of gravity of the rider and vehicle being at only 5 cm from the center of gravity of the vehicle, in order to position the rider more forward which is a better position when in anticipation of rougher terrain," it is respectfully submitted that neither Yasui et al. nor Dempsey discloses or suggests positioning a rider "forward of that shown" for a "better position when in anticipation of tougher terrain." It is Applicants who disclose positioning the rider forward to reduce the impact of bumps, and the examiner's reliance on Applicants' disclosure is an impermissible hindsight reconstruction of the claimed invention. Applicants, therefore, respectfully request withdrawal of the rejection of claims 2-5.

Claim 84 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard load having dimensions and weight of a 50-percentile human male, the load having a center of gravity in a standard position in which the standard load straddles the seat while the snowmobile is on flat terrain; a footrest positioned on each side of the seat; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the seat, each said footrest and the steering device are positioned and dimensioned with respect to one another so that the snowmobile 1) has a first center of gravity without the standard load and 2) has a second center of gravity when the standard load is in the standard position, and wherein a distance between a vertical line passing through the first center of gravity and a vertical line passing through the second center of gravity is between 0 cm and 14 cm.

For the reasons discussed above with respect to claim 1, the combination of Yasui et al. and Dempsey fails to describe or suggest all the limitations of claim 84. The examiner's selection of a weight for the snowmobile and subsequent calculation of "the combined c.g." using the incorrect determination that "the distance between the rider c.g. and the vehicle c.g. is approximately 43 cm" would not result in the invention of claim 84. There is also no motivation to combine the references. The rejection, therefore, should be withdrawn.

Claim 87 recites a snowmobile comprising a frame; an engine disposed on the frame; a drive track disposed below the frame and connected operatively to the engine for propulsion of the snowmobile; two skis disposed on the frame; a straddle seat disposed on the frame behind the engine, the seat being dimensioned to support a standard rider with a center of gravity in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; and a steering device disposed on the frame forward of the seat, the steering device being operatively connected to the two skis for steering the snowmobile, wherein the snowmobile has a first center of gravity without the rider and wherein the snowmobile is adapted to have a second center of gravity with the rider in the standard position such that, in use, a distance between a vertical line passing through the first center of gravity and a vertical line passing through the second center of gravity is between 0 cm and 14 cm.

For the reasons discussed above with respect to claims 1 and 84, the combination of Yasui et al. and Dempsey fails to disclose or suggest the limitations and the combination of references would not result in the invention of claim 87. There is also no motivation or suggestion to combine Yasui et al. and Dempsey in the manner proposed by the examiner. Accordingly, the combination fails to present a *prima facie* case of obviousness and the rejection should not be maintained.

With respect to claim 88, Applicants respectfully note that the claim depends from claim 40 was previously rejected over the combination of Yasui et al. and Mandal as applied to those claims. To the extent that claim 88 was rejected under both grounds, it is respectfully submitted that any combination of Yasui et al., Mandal and Dempsey would fail to describe or suggest all the limitations of claim 88. It is also respectfully submitted that there is no motivation or suggestion to combine the three references. In summary, reconsideration and withdrawal of the rejection of claims 1-5, 87 and 88 under 35 U.S.C. § 103(a) over Yasui et al. in view of Dempsey are respectfully requested.

Claims 55 and 57 were rejected under 35 U.S.C. § 103(a) over Marier et al. The rejection is respectfully traversed.

Claim 55 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed forward of the seat; two skis disposed on the frame and operatively connected to the steering shaft for steering the snowmobile; and a windshield disposed forward of the steering device, the windshield having a top; wherein the seat defines a seat position and the steering device defines a steering position for the standard rider in the standard position, and wherein a line between the steering position and the seat position forms an angle μ with a line between the seat position and the top of the windshield that lies between 10° and 20°.

The Office Action on page 18, lines 21-23, states that "[a] line drawn through the seat position and the steering handle forms a line approximately 10 degrees from a line through the seat position and the top of the windshield." The Office Action, on page 18, line 23, then states that the drawings of Marier et al. are not assumed to be to scale and concludes that based on the relative positioning of the steering handle, seat position and windshield shown

in Figure 1 of Marier et al., it would have been obvious to configure the snowmobile of Marier et al. such that the lines form a 10° angle.

Applicants respectfully request clarification of the rejection. If the claimed angle is considered to be shown by Figure 1 of Marier et al., it is respectfully submitted that the examiner's determination is entitled to little value. If the claimed angle is considered to be obvious from Figure 1, it is respectfully submitted that Figure 1 of Marier et al. does not suggest "dimensioning a snowmobile with those relative characteristics" as alleged by the examiner. Figure 1 of Marier et al. is a side elevation view of one embodiment of Marier et al. The examiner's determination that it "suggests dimensioning" the snowmobile of Marier et al. to include the angle recited in claim 55 is an impermissible hindsight reconstruction of the claimed invention. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 57 recites additional features of the invention and is allowable for the same reasons discussed above with respect to claim 55 and for the additional features recited therein. It is also respectfully submitted that the examiner's determination that an "obvious optimization" of Marier et al. would result in exactly the angle recited in claim 57 is nothing more than an exercise in hindsight. As such, reconsideration and withdrawal of the rejection of claims 55 and 57 under 35 U.S.C. § 103(a) over Marier et al. are respectfully requested.

Claim 58 was rejected under 35 U.S.C. § 103(a) over Marier et al. in view of Parks. The rejection is respectfully traversed.

Claim 58 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; a steering device disposed forward of the seat; two skis disposed on the frame and operatively connected to the steering device for steering the snowmobile; and a windshield disposed forward of the seat, the windshield having a top; wherein, when in motion, the windshield defines a laminar flow region of moving air that extends upwardly and rearwardly from the top thereof, and wherein, when seated in the seat and when grasping the steering device in the standard position, the rider's head is positioned within the laminar flow region.

The Office Action on page 19, lines 13-15, acknowledges that Marier et al. do not disclose or suggest positioning the rider's head in a laminar flow region of air moving over the windshield. Parks is cited as allegedly curing this deficiency of Marier et al.

It is respectfully submitted that Parks also does not disclose or suggest the rider's head being positioned within the laminar flow region when the rider is seated in the seat and grasping the steering device in the standard position.

Parks discloses a replacement windshield for a snowmobile including a front face that flushingly engages the headlight housing and hood and a rear face that flushingly engages the dashboard and hood to prevent accumulation of ice and snow near the dashboard. During operation, an air flow course "A" is created, where air initially passes over the hood 22 for initial upward deflection by the front face 16 for vertical engagement to the first lip 24. The substantially vertical first lip 24 in conjunction with the angularly extending rearward and upward front face 16 directs the air flow course "A" substantially vertically over the snowmobile during use. Cold air, ice and/or snow are preferably directed over the top of the heads of a driver or passenger during operation of the snowmobile.

There is no disclosure or suggestion by Parks of the driver's or passenger's head being positioned in a laminar flow region. Parks discloses that the flow is directed over the top of the heads of the driver and/or passenger, but is silent as to whether the flow is laminar or turbulent at the position of the driver's or passenger's head.

The combination of Marier et al. and Parks fails to describe or suggest all the limitations of claim 58 and fails to present a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection of claim 58 under 35 U.S.C. § 103(a) over Marier et al. in view of Parks are respectfully requested.

Claims 59 and 60 were rejected under 35 U.S.C. § 103(a) over Christensen et al. in view of Hauser. The rejection is respectfully traversed.

It is respectfully submitted that Christensen et al. do not disclose that the shaft *k* is positioned forward of the steering handle 10. As shown in Figure 3 of Christensen et al., the steering handle 10 is at the same horizontal position on the snowmobile as the shaft *k*. In addition, there is no discussion in the text by Christensen et al. of a relationship between the shaft *k* and the steering handle 10.

Hauser also fails to disclose or suggest a steering device disposed forward of the forward-most drive track axle. As shown in Figure 2, the handle bar 76 is clearly behind the drive shaft 152.

The combination of Christensen et al. and Hauser fails to describe or suggest all the limitations of claim 59 and fails to present a *prima facie* case of obviousness. Accordingly, the rejection cannot be maintained.

Claim 60 recites a snowmobile comprising a frame having a forward-most drive track axle disposed thereon; a straddle seat disposed on the frame; an engine disposed on the frame in front of the seat; two skis disposed on the frame; and a steering device disposed on the frame and operatively connected to the two skis for steering the snowmobile; wherein the snowmobile has a center of gravity without a rider and the steering device is disposed on the frame forward of the center of gravity, and wherein the forward-most axle is positioned forward of the center of gravity and rearward of a rearward-most portion of the steering device such that the center of gravity is rearward of the rearward-most portion of the steering device, and wherein the frame includes a tunnel, and the forward-most drive track axle is positioned in the tunnel.

Neither Christensen et al. nor Hauser discloses or suggests a tunnel and a forward-most drive track axle positioned in the tunnel, as recited in claim 60. Therefore, the combination fails to describe or suggest all the claim limitations and fails to present a *prima facie* case of obviousness.

Reconsideration and withdrawal of the rejection of claims 59 and 60 under 35 U.S.C. § 103(a) over Christensen et al. in view of Hauser are respectfully requested.

Claims 64–68 were rejected under 35 U.S.C. § 103(a) over Dempsey in view of AAPA. The rejection is respectfully traversed.

Claim 64 recites a snowmobile comprising a frame; a straddle seat disposed on the frame, the seat being dimensioned to support a standard rider in a standard seat position in which the standard rider straddles the seat while the snowmobile is heading straight ahead on flat terrain, the standard rider having dimensions and weight of a 50-percentile human male; an engine disposed on the frame in front of the seat; two skis disposed on the frame; and a steering device disposed on the frame and forward of the seat defining a steering position for the standard rider in the standard seat position, the steering device being operatively connected to the two skis for steering the snowmobile, wherein a distance between vertical lines passing through the steering position and the standard seat position is between 40 and 90 cm.

It is respectfully submitted that the examiner has failed to correctly determine the scope and content of the prior art. Figure 2-1 of Dempsey, which discloses the Bombardier Olympique snowmobile, does not disclose or suggest a distance between vertical lines passing through the steering position and the standard seat position is between 40 and 90 cm. Figure 2-1 of Dempsey discloses that the seat of the Olympique snowmobile is 30 inches (approximately 76 cm) long. There are no dimensions provided in Figure 2-1 that relate to the steering position of the Olympique snowmobile.

Figure 3-4 of Dempsey also does not disclose or suggest a distance between vertical lines passing through the steering position and the standard seat position is between 40 and 90 cm. Figure 3-4 is not to scale. There is nothing in Dempsey to suggest that the rider shown in Figure 3-4 has an arm length of approximately 72 cm as alleged by the examiner.

AAPA also does not disclose or suggest a distance between vertical lines passing through the steering position and the standard seat position between 40 and 90 cm. The combination of Dempsey and AAPA, thus, fails to present a *prima facie* case of obviousness.

Claims 65-68 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 64 and for the additional features recited therein.

Reconsideration and withdrawal of the rejection of claims 64-68 under 35 U.S.C. § 103(a) over Dempsey in view of AAPA are respectfully requested.

Claims 73 and 86 were rejected under 35 U.S.C. § 103(a) over Kitamura et al.in view of Trautwein. The rejection is respectfully traversed.

Claims 73 recites a snowmobile comprising a frame; a straddle seat disposed on the frame; an engine disposed on the frame in front of the seat; two skis disposed on the frame; a steering device disposed on the frame and operatively connected to the two skis for steering the snowmobile; and right and left sideboards extending laterally from the frame below the seat on either side thereof, each of the sideboards having a forward portion suitable for placement of a rider's foot thereon, the forward portion of each sideboard disposed at an angle Δ with horizontal that is –5° to -10°; and right and left toe-holds disposed respectively above the rider's toes in a vertical plane for allowing the rider to releasably secure himself to the snowmobile.

The Office Action on page 22, lines 4-6, states that Kitamura et al. disclose sideboards angled at approximately 6° down toward the front of the vehicle. On page 22, lines 13-16, the Office Action states that it would have been obvious to angle the toe holds of

Kitamura et al. at an angle of approximately 6° as suggested by Figure 9 to provide the footboard configuration shown.

As the English translation of Kitamura et al. makes clear, there is no disclosure of a particular angle, or range of angles. The examiner's determination that approximately 6° is shown is entitled to little value.

Trautwein does not disclose toe holds disposed above the rider's toes in a vertical plane, as recited in claim 73. As discussed above, the footrests 10 of Trautwein, at best, include a raised edge along the sides.

It is also respectfully noted that claim 73 does not recite a toe hold angled at approximately 6°. Claim 73 recites toe holds in a vertical plane.

The combination of Kitamura et al. and Trautwein fails to describe or suggest all the limitations of claim 73 and fails to present a *prima facie* case of obviousness. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 86 recites a snowmobile comprising a frame; a straddle seat disposed on the frame; an engine disposed on the frame in front of the seat; two skis disposed on the frame; right and left sideboards extending laterally from the frame below the seat on either side thereof, each of the sideboards having a forward portion disposed at an angle Δ with horizontal that is –5° to -10°; and right and left toe-holds associated with the right and left sideboards to allow the rider to releasably secure himself to the snowmobile.

Kitamura et al. do not disclose or suggest sideboards having a forward portion disposed at an angle Δ with horizontal that is –5° to -10° or toe holds. Trautwein discloses a horizontal footrest having a raised edge along the side, but does not disclose or suggest toe holds. The combination fails to describe or suggest all the claim limitations and fails to present a *prima facie* case of obviousness. As such, it is respectfully submitted that the rejection should be withdrawn.

In view of the above amendments and remarks, Applicants respectfully submit that all of the claims are allowable and that the entire application is in condition for allowance.

Should the examiner believe that anything further is desirable to place the application in better condition for allowance, the examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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